

Maryland

HC

107

.M32

no.329


Folio

UNIV. OF MD. COLLEGE PARK



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INTERIM POPULATION PROJECTION FOR THE ELECTION DISTRICTS OF THE STATE OF MD. FALL 1977

Maryland
HC
107
-M32
no. 329
Folio

For Internal Use By Dept. Of State Planning Only

175 73050



October 17, 1977

MEMORANDUM

TO: Larry Fogelson
FROM: David Spottheim
RE: Interim Population Projection For the Election Districts of the State

Attached please find two copies of a computer printout entitled "Interim Population Projection for the Election Districts of the State of Maryland." The prints depict the initial result (product) of the population projection for the years 1975-2000 at five-year intervals.

The central theme behind this interim projection is that an Election District (MCD) is not a self-contained geo-economic and, as such, the population projection is influenced by the population growth in its respective county and region. To realize the above empirically, a hybrid methodology has been employed:

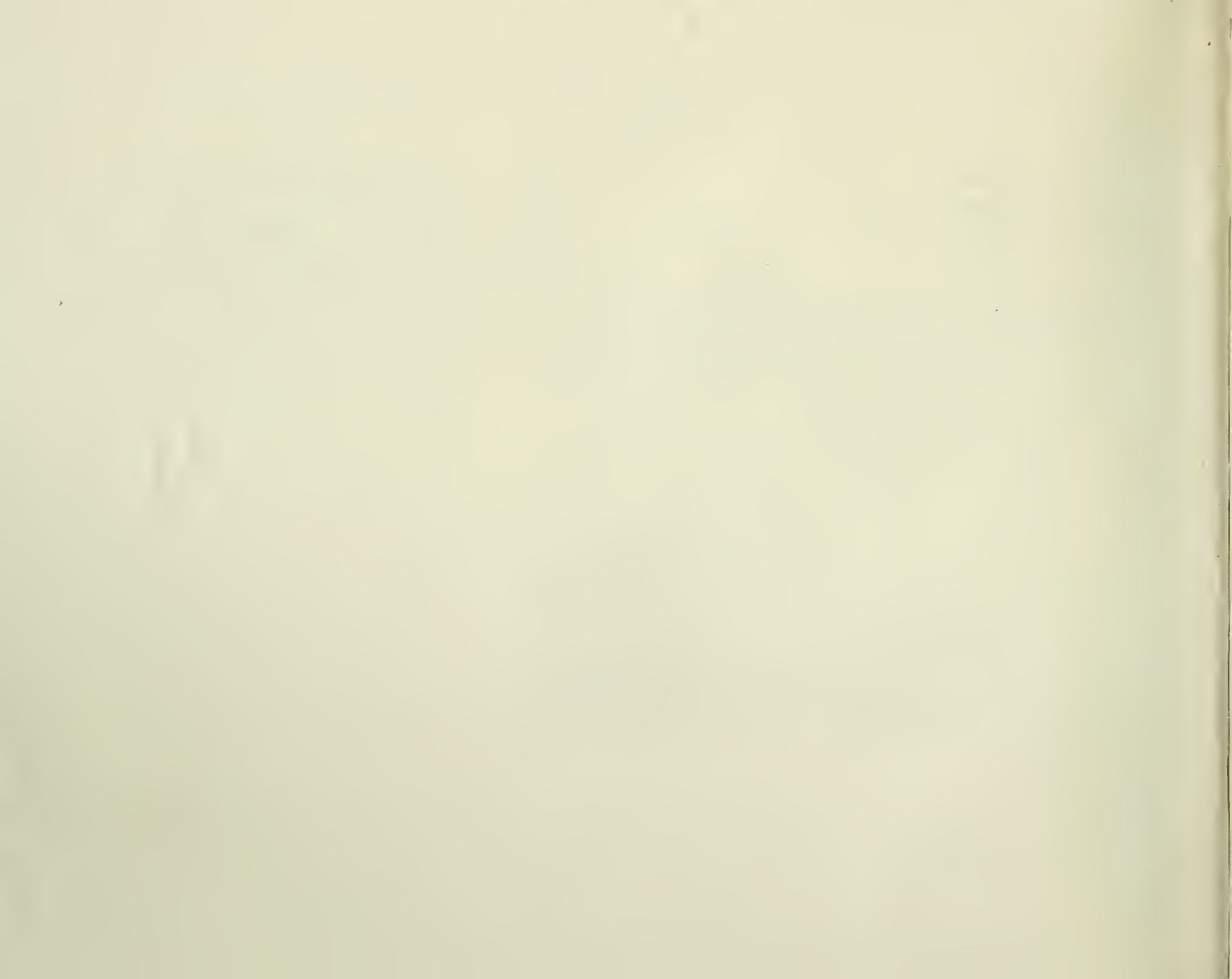
- a) First extrapolation equations (based on a recent article in the July 1977 issue of JAIP) were developed and used to estimate (or project) the 1975 population, followed by
- b) Moving average procedures were developed to project the MCD's population for the years 1980-2000, and finally
- c) the distributions of the projected MCD's population (generated in the above phase) were adjusted to coincide with the control total of the most recent (May 1977) county population projection.

A cursory examination of the figures generated by the aforementioned methodology is very promising. In most counties the discrepancies of the projections before and after adjustment are within the $\pm 10\%$ limit which was my aim throughout this endeavor. If time will permit an attempt will be made to achieve such a limit for all counties.

Since throughout this phase of the project experimentation with numerous techniques were carried out, the experience gained could be used to develop criteria for evaluating small area projections that have been submitted by counties for Departmental approval. This matter will be discussed in a forthcoming working paper summarizing the interim phase of the Election District Study.

cc: Benjamin
Miller

INTERIM POPULATION
PROJECTION FOR THE
ELECTION DISTRICTS
OF THE STATE OF MD.
OCT. 1977



November 28, 1977

MEMORANDUM

TO: Richard Gucker *D.S.*
FROM: David Spottheim - Research Division
RE: Interim Population Projection For the Election Districts of the State of Maryland

As per request by your staff, attached please find a copy of a computer printout entitled "Interim Population Projection for the Election Districts of the State of Maryland." The prints depict the initial result (product) of the population projection for the years 1975-2000 at five-year intervals.

The central theme behind this interim projection is that an Election District (MCD) is not a self-contained geo-economic unit and, as such, the population projection is influenced by the population growth in its respective county and region. To realize the above empirically, a hybrid methodology has been employed:

- a) First extrapolation equations (based on a recent article in the July 1977 issue of JAIP) were developed and used to estimate (or project) the 1975 population, followed by
- b) Moving average procedures were developed to project the MCD's population for the years 1980-2000, and finally
- c) The distributions of the projected MCD's population (generated in the above phase) were adjusted to coincide with the control total of the most recent (May 1977) county population projection.

A cursory examination of the printout will reveal that the layout is as follows: County name, Election Districts (MCD) No., actual population by MCD for the years 1960, 1970, and 1975 (if any), as well as forecasted figures for the years 1975-2000. Please note that the row denoted by "Sum & Co. Proj. used for Adj." contains figures of the recent county population projection. These figures were used as control total. Each column (i.e. Pop. Distr. in the MCD's) has been adjusted to coincide with its control total.

Finally, please note that this projection is for internal use by Department of State Planning staff only.

DS:mv

cc: Dr. Miller
Mr. Benjamin



EXTENDED 1100/40 SVC. SEE 'NEWS.L SYSTEMHOURS'
 RUNID: DAVE 11/25/77 15:20:02 LAST RUN: 11/23 15:55
 QASG,A POP.
 READY
 QASG,A POPED.
 READY
 QASG,A PM.
 READY
 QFOR POP,PRO3,TEST
 FOR SE3A-11/25/77-15:21:56 (16)
 QRTTY W,132
 -QWCOMPLETE
 QMAP,1,TEST
 END FOR
 MAP2AR2H 11/25-15:23 TEST
 QSTATUS
 START=013153, PROG SIZE(1/D)=5438*/2887
 END MAP 2271 MSEC.
 RUNS: DAVE*/OPEN(0)
 DEMAND: 39, BATCH: 8, BACKLOG: 2?
 **
 QUSE 10.,PM.
 READY
 QXQT TEST
 QADD POP.CO
 QADD POP.COA

ALLEGANY

MCD	1960	1970	1975 PROJ	1975 PROJ	1980 PROJ	1985 PROJ	1990 PROJ	1995 PROJ	2000 PROJ
1	596.	584.	0.	557.	544.	561.	579.	589.	593.
2	843.	975.	0.	1020.	936.	1027.	1058.	1079.	1086.
3	1328.	1260.	0.	1172.	1144.	1179.	1216.	1239.	1248.
4	12652.	12509.	0.	11862.	11593.	11940.	12312.	12544.	12637.
5	7944.	6880.	0.	6160.	6015.	6201.	6394.	6515.	6560.
6	8453.	7924.	0.	7326.	7154.	7374.	7604.	7748.	7802.
7	3250.	5106.	0.	6013.	5871.	6052.	6241.	6359.	6403.
8	5231.	4553.	0.	4076.	3981.	4104.	4231.	4311.	4342.
9	1315.	1393.	0.	1398.	1365.	1407.	1450.	1477.	1489.
10	1617.	1464.	0.	1332.	1300.	1341.	1382.	1408.	1417.
11	962.	1293.	0.	1453.	1419.	1463.	1508.	1537.	1548.
12	2262.	2546.	0.	2629.	2568.	2646.	2728.	2780.	2800.
13	2435.	2320.	0.	2161.	2110.	2176.	2243.	2286.	2302.
14	1209.	973.	0.	871.	851.	877.	904.	921.	927.
15	2186.	1114.	0.	997.	974.	1004.	1035.	1054.	1062.
16	2165.	2181.	0.	2136.	2086.	2150.	2217.	2258.	2275.
17	356.	164.	0.	147.	143.	148.	152.	155.	156.
18	1476.	1391.	0.	1289.	1259.	1298.	1338.	1363.	1373.
19	767.	786.	0.	776.	758.	781.	806.	821.	827.
20	1931.	2047.	0.	2054.	2016.	2068.	2132.	2172.	2187.
21	1263.	1450.	0.	1512.	1476.	1521.	1568.	1598.	1609.
22	4247.	3116.	0.	2792.	2726.	2810.	2897.	2952.	2973.
23	4284.	4108.	0.	3839.	3749.	3865.	3984.	4060.	4083.
24	1655.	1764.	0.	1775.	1730.	1786.	1842.	1877.	1890.
25	284.	776.	0.	951.	920.	957.	987.	1005.	1012.
26	2081.	4159.	0.	5096.	4977.	5129.	5289.	5389.	5427.
27	390.	438.	0.	451.	441.	455.	469.	478.	481.
28	1980.	514.	0.	460.	449.	463.	478.	486.	490.
29	5899.	7410.	0.	8064.	7875.	8117.	8370.	8528.	8588.



30	734.	480.	0.	451.	440.	453.	468.	476.	480.
31	1471.	1264.	0.	1132.	1105.	1139.	1175.	1197.	1205.
32	723.	957.	0.	1068.	1043.	1075.	1108.	1130.	1137.
33	181.	171.	0.	158.	155.	159.	165.	167.	169.
BEFORE ADJUSTMENT				8 351.	90600.	93500.	93400.	94600.	95 17.
SUM & CO. PROJ. USED FOR ADJ				83175.	81225.	83726.	86331.	87962.	88570.

ANNE ARUNDEL

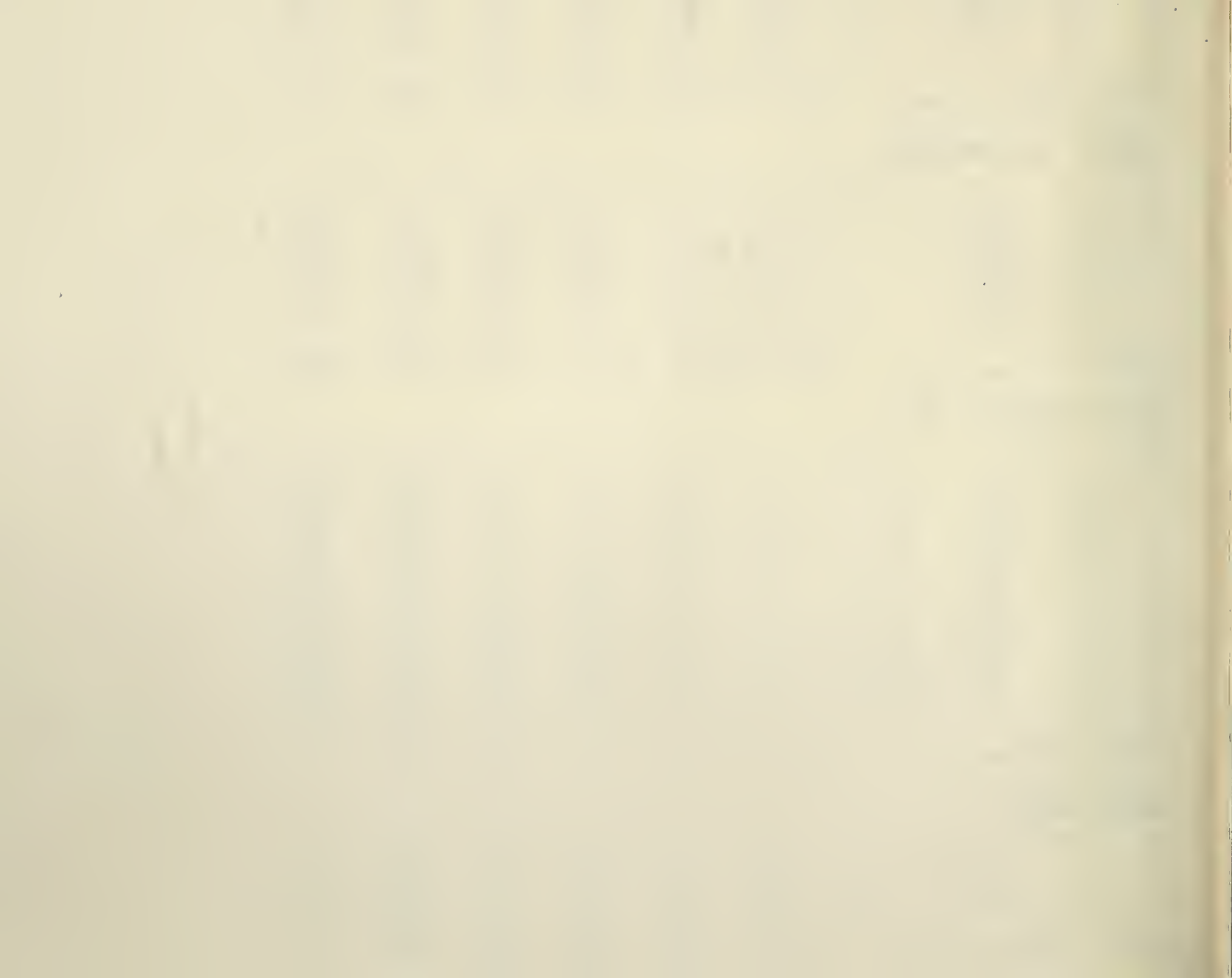
MCD	1960	1970	1975	PROJ 1975	PROJ 1980	PROJ 1985	PROJ 1990	PROJ 1995	PROJ 2000
1	10322.	14207.	0.	17438.	20053.	22719.	26104.	28861.	31447.
2	14082.	25312.	0.	28427.	32691.	37912.	42677.	47244.	51567.
3	58992.	96127.	0.	105382.	121189.	136866.	151476.	165233.	176854.
4	37329.	55098.	0.	70445.	81013.	94202.	110731.	124471.	138614.
5	50214.	60868.	0.	69315.	79712.	86185.	95073.	102093.	106943.
6	28006.	35079.	0.	40729.	46839.	51253.	57141.	61807.	65422.
7	4144.	5310.	0.	6249.	7187.	7930.	8904.	9682.	10320.
8	3545.	5938.	0.	6071.	6982.	7821.	8631.	9378.	9993.
BEFORE ADJUSTMENT				298149.	306166.	330569.	343068.	359804.	380118.
SUM & CO. PROJ. USED FOR ADJ				34056.	395667.	444886.	500756.	548771.	591209.

BALTIMORE CO.

MCD	1960	1970	1975	PROJ 1975	PROJ 1980	PROJ 1985	PROJ 1990	PROJ 1995	PROJ 2000
1	53809.	63642.	69435.	64685.	68113.	73466.	79634.	85613.	92769.
2	27504.	55618.	65573.	62524.	65837.	70966.	76925.	82682.	89563.
3	26999.	38305.	44498.	42926.	45201.	48723.	52813.	56767.	61495.
4	15604.	30691.	34033.	34000.	35802.	38592.	41832.	44963.	48704.
5	2551.	3120.	3287.	3228.	3409.	3645.	3973.	4270.	4525.
6	1627.	2076.	2433.	2198.	2314.	2495.	2704.	2906.	3149.
7	4167.	4714.	4682.	4678.	4925.	5231.	5615.	5985.	6412.
8	21408.	34563.	45542.	40791.	42052.	46298.	50185.	53941.	58435.
9	86045.	102767.	113491.	104374.	109005.	118735.	128758.	138521.	150238.
10	3740.	5647.	6070.	5438.	5726.	6173.	6594.	7054.	7592.
11	20582.	26514.	30541.	28379.	29843.	32011.	34015.	37528.	40694.
12	70659.	72261.	64892.	67890.	71496.	73372.	76423.	79747.	83070.
13	35708.	39853.	39224.	39260.	41339.	43696.	46716.	49654.	52947.
14	27742.	36409.	42686.	39134.	41208.	44119.	49140.	51751.	56062.
15	94283.	101191.	105785.	97600.	102771.	107171.	113269.	119398.	126027.
BEFORE ADJUSTMENT				602439.	687599.	720748.	749176.	780573.	814639.
SUM & CO. PROJ. USED FOR ADJ				637114.	670873.	715221.	768505.	820771.	871770.

CALVERT

MCD	1960	1970	1975	PROJ 1975	PROJ 1980	PROJ 1985	PROJ 1990	PROJ 1995	PROJ 2000
1	5423.	6404.	0.	7765.	7959.	7869.	8008.	8357.	8494.
2	4760.	6211.	0.	7955.	8154.	8357.	8374.	9153.	9312.
3	5643.	8067.	0.	10862.	11133.	12367.	13724.	13744.	13943.
BEFORE ADJUSTMENT				24252.	24960.	28456.	31339.	32739.	34077.
SUM & CO. PROJ. USED FOR ADJ				26582.	27246.	28593.	30296.	31249.	31744.



CAROLINE

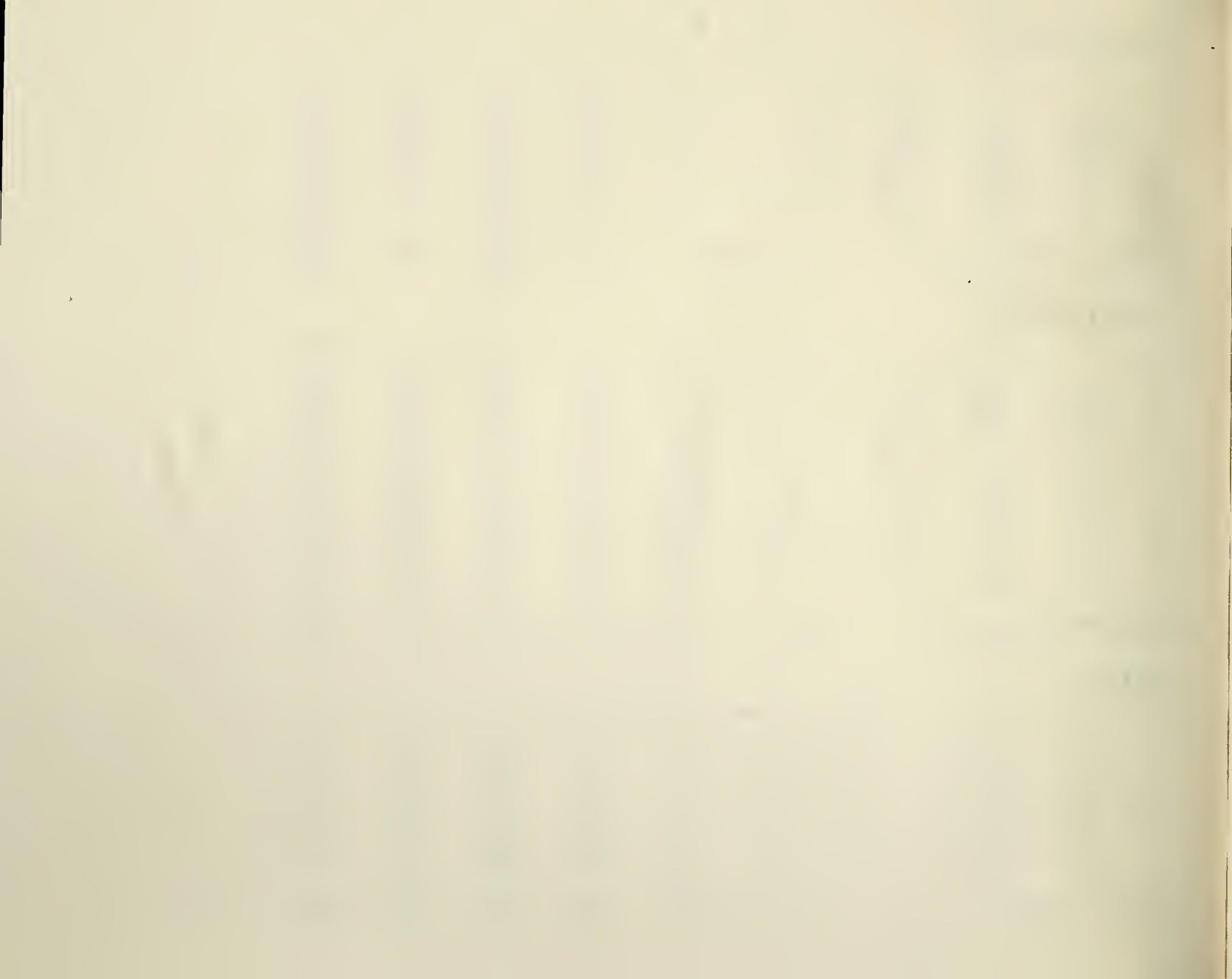
MCD	1960	1970	1975 PROJ	1975 PROJ	1980 PROJ	1985 PROJ	1990 PROJ	1995 PROJ	2000 PROJ
1	1739.	1887.	2160.	2115.	1907.	2037.	2211.	2248.	2195.
2	2744.	2817.	3200.	3077.	2906.	2963.	3217.	3270.	3118.
3	4071.	3771.	4190.	3932.	3714.	3787.	4112.	4130.	4267.
4	2405.	2675.	3180.	3032.	2864.	2921.	3171.	3203.	3200.
5	3965.	4037.	4320.	4392.	4188.	4209.	4593.	4658.	4765.
6	1382.	1313.	1560.	1516.	1432.	1460.	1586.	1611.	1645.
7	1771.	1882.	2140.	2088.	1973.	2011.	2184.	2119.	2266.
8	1385.	1390.	1650.	1516.	1432.	1460.	1586.	1611.	1645.
BEFORE ADJUSTMENT			22296.	23663.	24509.	24995.	25412.	26025.	
SUM & CO. PROJ. USED FOR ADJ			21668.	20460.	20869.	22660.	23030.	23511.	

CARROLL

MCD	1960	1970	1975 PROJ	1975 PROJ	1980 PROJ	1985 PROJ	1990 PROJ	1995 PROJ	2000 PROJ
1	3603.	4142.	4578.	4792.	5276.	5832.	6542.	7087.	7542.
2	2114.	2672.	2587.	2591.	2854.	3026.	3160.	3318.	3449.
3	2130.	2651.	3749.	3755.	4135.	4622.	5206.	5639.	6082.
4	4368.	6532.	8980.	8643.	9516.	10636.	11980.	12979.	13813.
5	8431.	11475.	11209.	11228.	12363.	13708.	14004.	14816.	15508.
6	4238.	5253.	7511.	7524.	8285.	9259.	10430.	11290.	12025.
7	13175.	16304.	16256.	16284.	17930.	19117.	20182.	21307.	22310.
8	3410.	5290.	6656.	6667.	7341.	8206.	9243.	10713.	10657.
9	1350.	1925.	3434.	3480.	3788.	4234.	4768.	5160.	5498.
10	1080.	1306.	1356.	1358.	1495.	1608.	1725.	1837.	1944.
11	2032.	2414.	2481.	2485.	2736.	2925.	3121.	3309.	3485.
12	1649.	1678.	1593.	1596.	1757.	1784.	1925.	1871.	1897.
13	2420.	3106.	3620.	3802.	4186.	4678.	5270.	5709.	6075.
14	2735.	4258.	6430.	6441.	7092.	7927.	8929.	9673.	10294.
BEFORE ADJUSTMENT			80469.	87676.	95705.	104635.	113518.	121774.	
SUM & CO. PROJ. USED FOR ADJ			80607.	81756.	97162.	106385.	114029.	120549.	

CECIL

MCD	1960	1970	1975 PROJ	1975 PROJ	1980 PROJ	1985 PROJ	1990 PROJ	1995 PROJ	2000 PROJ
1	2515.	2658.	0.	2737.	2900.	3205.	3429.	3563.	3655.
2	2795.	3352.	0.	3656.	3904.	4281.	4581.	4760.	4832.
3	12710.	13632.	0.	14131.	15437.	16551.	17704.	18398.	18771.
4	2696.	3390.	0.	3793.	4143.	4442.	4751.	4937.	5065.
5	7442.	8928.	0.	9738.	10639.	11405.	12201.	12678.	13005.
6	4318.	4903.	0.	5355.	5800.	6272.	6710.	6972.	7152.
7	13125.	13182.	0.	13264.	14490.	15536.	16618.	17269.	17713.
8	1394.	1491.	0.	1544.	1687.	1808.	1934.	2010.	2061.
9	1413.	1656.	0.	1787.	1952.	2093.	2239.	2327.	2387.
BEFORE ADJUSTMENT			57782.	65371.	74690.	80055.	86307.	90566.	
SUM & CO. PROJ. USED FOR ADJ			56005.	61182.	65594.	70168.	72914.	74791.	



CHARLES

P. 4

MCD	1960	1970	1975 PROJ	1975 PROJ	1980 PROJ	1985 PROJ	1990 PROJ	1995 PROJ	2000 PROJ
1	3353.	4707.	5633.	5901.	6095.	6735.	7204.	7603.	7929.
2	1089.	1364.	1577.	1572.	1627.	1750.	1873.	1992.	1973.
3	1962.	2442.	2650.	2894.	2904.	3174.	3264.	3755.	3499.
4	2182.	2504.	2910.	2967.	3071.	3284.	3411.	3580.	3735.
5	2056.	2602.	3680.	3017.	3124.	3772.	3437.	3667.	3823.
6	5036.	12607.	16550.	17474.	18037.	22040.	24227.	25545.	26439.
7	9252.	10687.	11604.	11745.	12157.	12690.	12744.	13120.	13641.
8	3598.	5688.	8727.	9214.	9537.	11623.	12765.	13470.	14047.
9	1735.	2129.	2410.	2425.	2510.	2679.	2742.	2863.	2936.
10	2209.	2948.	3315.	3527.	3651.	4019.	4229.	4462.	4653.
BEFORE ADJUSTMENT			57346.	60306.	69402.	77035.	82698.	87148.	
SUM & CO. PROJ. USED FOR ADJ			60546.	62372.	71307.	75796.	79536.	82943.	

DORCHESTER

MCD	1960	1970	1975 PROJ	1975 PROJ	1980 PROJ	1985 PROJ	1990 PROJ	1995 PROJ	2000 PROJ
1	1528.	1548.	0.	1576.	1535.	1589.	1658.	1721.	1764.
2	1763.	1753.	0.	1759.	1713.	1774.	1851.	1921.	1970.
3	1356.	1300.	0.	1282.	1249.	1293.	1349.	1401.	1436.
4	376.	285.	0.	261.	253.	262.	274.	284.	292.
5	681.	606.	0.	577.	562.	582.	607.	630.	645.
6	871.	712.	0.	652.	635.	658.	686.	713.	730.
7	14797.	13863.	0.	13526.	13176.	13644.	14237.	14777.	15149.
8	758.	806.	0.	839.	818.	846.	883.	917.	940.
9	688.	635.	0.	615.	600.	621.	648.	672.	689.
10	940.	754.	0.	689.	671.	695.	725.	753.	771.
11	134.	108.	0.	99.	96.	100.	104.	108.	110.
12	846.	1027.	0.	1139.	1108.	1149.	1198.	1243.	1274.
13	635.	592.	0.	576.	561.	581.	606.	629.	645.
14	1101.	2086.	0.	2608.	2540.	2630.	2748.	2849.	2919.
15	2413.	2532.	0.	2620.	2572.	2643.	2757.	2863.	2934.
16	310.	357.	0.	386.	376.	389.	406.	421.	432.
17	342.	325.	0.	319.	311.	322.	336.	349.	357.
18	127.	116.	0.	112.	109.	113.	117.	123.	125.
BEFORE ADJUSTMENT			30817.	31679.	33027.	33230.	37804.	34550.	
SUM & CO. PROJ. USED FOR ADJ			29634.	28965.	29891.	31132.	32374.	31179.	

FREDERICK

MCD	1960	1970	1975 PROJ	1975 PROJ	1980 PROJ	1985 PROJ	1990 PROJ	1995 PROJ	2000 PROJ
1	2396.	2654.	2890.	2869.	2940.	3190.	3415.	3640.	3849.
2	24017.	25908.	28661.	27683.	28853.	30873.	32956.	35123.	37137.
3	2766.	2897.	4008.	3900.	4065.	4349.	4643.	4948.	5232.
4	976.	1140.	1286.	1262.	1315.	1407.	1502.	1601.	1693.
5	4574.	5428.	5694.	6050.	6396.	6747.	7202.	7670.	8119.
6	1176.	1262.	1439.	1345.	1402.	1500.	1601.	1706.	1805.
7	2232.	3014.	3687.	3559.	3709.	3969.	4236.	4515.	4774.
8	1123.	1257.	1474.	1365.	1423.	1522.	1625.	1732.	1831.
9	3596.	4904.	6788.	6005.	6895.	7360.	7864.	8330.	8761.
10	1802.	2053.	2241.	2247.	2342.	2506.	2675.	2851.	3014.



1	1933.	1217.	2306.	2793.	2389.	2556.	2730.	2908.	3075.
12	1566.	1592.	1764.	1657.	1727.	1848.	1972.	2102.	2213.
13	1018.	1556.	1723.	1685.	1757.	1880.	2007.	2139.	2261.
14	1098.	1311.	1761.	1714.	1786.	1911.	2040.	2174.	2298.
15	4067.	4973.	5726.	5618.	5854.	6265.	6687.	7127.	7535.
16	1327.	1685.	1951.	1935.	2017.	2158.	2304.	2456.	2597.
17	1102.	1314.	1453.	1467.	1529.	1637.	1747.	1862.	1969.
18	1448.	1930.	2421.	2265.	2361.	2527.	2697.	2874.	3039.
19	760.	837.	970.	900.	940.	1007.	1074.	1145.	1210.
20	1554.	2121.	2627.	2516.	2623.	2806.	2996.	3193.	3376.
21	2042.	3565.	4351.	4094.	4271.	4570.	4873.	5197.	5498.
22	1032.	1076.	1173.	1184.	1235.	1321.	1411.	1503.	1589.
23	892.	1110.	1197.	1264.	1317.	1409.	1504.	1603.	1695.
24	2576.	3541.	3866.	3762.	3921.	4196.	4478.	4773.	5046.
25	354.	3564.	3694.	3694.	3846.	4115.	4392.	4681.	4947.
26	1759.	2096.	3314.	3225.	3361.	3597.	3839.	4092.	4326.

BEFORE ADJUSTMENT	98817.	111932.	131229.	141925.	150430.	160405.
SUM & CO. PROJ. USED FOR ADJ	96154.	100227.	107240.	114177.	122094.	128990.

GARRETT

MCD	1960	1970	1975 PROJ	1975 PROJ	1980 PROJ	1985 PROJ	1990 PROJ	1995 PROJ	2000 PROJ
1	911.	1079.	0.	1238.	1264.	1262.	1273.	1297.	1339.
2	1661.	1704.	0.	1825.	1863.	1891.	1873.	1917.	1979.
3	2423.	2517.	0.	2712.	2768.	2822.	2819.	2871.	2963.
4	695.	895.	0.	1069.	1091.	1089.	1094.	1120.	1156.
5	1100.	1071.	0.	1225.	1251.	1249.	1261.	1283.	1325.
6	850.	974.	0.	1097.	1122.	1121.	1130.	1151.	1188.
7	1558.	1813.	0.	2063.	2106.	2103.	2122.	2160.	2230.
8	1561.	1565.	0.	1657.	1692.	1705.	1686.	1717.	1774.
9	970.	890.	0.	990.	1010.	1021.	1028.	1047.	1081.
10	956.	1130.	0.	1296.	1322.	1321.	1333.	1357.	1401.
11	189.	155.	0.	163.	167.	166.	164.	167.	172.
12	520.	595.	0.	671.	686.	695.	690.	702.	726.
13	1180.	911.	0.	937.	953.	950.	927.	944.	970.
14	3235.	3443.	0.	3752.	3830.	3825.	3809.	3830.	4005.
15	478.	432.	0.	477.	487.	490.	491.	500.	516.
16	2132.	2302.	0.	2526.	2579.	2575.	2571.	2618.	2703.

BEFORE ADJUSTMENT	23192.	23490.	23782.	24582.	24785.	25087.
SUM & CO. PROJ. USED FOR ADJ	23698.	24190.	24275.	24295.	24731.	25527.

HARFORD

MCD	1960	1970	1975 PROJ	1975 PROJ	1980 PROJ	1985 PROJ	1990 PROJ	1995 PROJ	2000 PROJ
1	14426.	27977.	0.	31601.	31692.	35867.	38065.	40189.	41862.
2	23236.	29450.	0.	37193.	39645.	42426.	46781.	49391.	51446.
3	17375.	30803.	0.	37452.	35667.	37969.	39793.	41998.	43745.
4	5803.	8380.	0.	11332.	12081.	12861.	14181.	14973.	15596.
5	7412.	8977.	0.	11967.	11797.	12428.	13532.	14287.	14831.
6	8510.	9791.	0.	11747.	12526.	12959.	13896.	14636.	15245.

BEFORE ADJUSTMENT	124628.	130901.	144270.	155368.	165923.	176262.
SUM & CO. PROJ. USED FOR ADJ	136381.	145410.	154510.	166248.	175473.	182775.

HOWARD

P. 6

MCD	1960	1970	1975 PROJ	1975 PROJ	1980 PROJ	1985 PROJ	1990 PROJ	1995 PROJ	2000 PROJ
1	7262.	9613.	8987.	8140.	11907.	13929.	11549.	1153.	11962.
2	9575.	17445.	25091.	22726.	33245.	44090.	48782.	56419.	64191.
3	2721.	3657.	4470.	4049.	5923.	7086.	7069.	7568.	8537.
4	3309.	4250.	5531.	5010.	7329.	8907.	9148.	9845.	11315.
5	4119.	13536.	26079.	23621.	34554.	41906.	50758.	58206.	67222.
6	9166.	13400.	38034.	34449.	50394.	61248.	76205.	84901.	101448.
BEFORE ADJUSTMENT			108192.	115092.	136152.	179869.	214844.	245062.	
SUM & CO. PROJ. USED FOR ADJ			97994.	143151.	176756.	203719.	232921.	263674.	

KENT

MCD	1960	1970	1975 PROJ	1975 PROJ	1980 PROJ	1985 PROJ	1990 PROJ	1995 PROJ	2000 PROJ
1	2576.	2707.	0.	2807.	2841.	2854.	3031.	2978.	3027.
2	1797.	1840.	0.	1881.	1904.	1995.	2004.	1967.	2001.
3	1919.	1956.	0.	1995.	2019.	2007.	2119.	2082.	2116.
4	3964.	4209.	0.	4390.	4411.	4479.	4757.	4674.	4751.
5	2929.	2889.	0.	2906.	2942.	2895.	3034.	2970.	3018.
6	1320.	1352.	0.	1383.	1399.	1394.	1473.	1447.	1471.
7	976.	1193.	0.	1345.	1361.	1405.	1492.	1466.	1490.
BEFORE ADJUSTMENT			15779.	16882.	16970.	17177.	17575.	17703.	
SUM & CO. PROJ. USED FOR ADJ			16706.	16911.	16928.	17910.	17586.	17875.	

MONTGOMERY

MCD	1960	1970	1975 PROJ	1975 PROJ	1980 PROJ	1985 PROJ	1990 PROJ	1995 PROJ	2000 PROJ
1	2133.	3452.	3880.	3705.	4021.	4560.	5024.	5434.	5813.
2	3136.	3980.	4260.	4302.	4671.	4843.	5337.	5773.	6175.
3	1920.	1993.	4240.	4048.	4396.	4983.	5490.	5939.	6353.
4	37896.	81908.	90020.	84755.	92073.	104324.	114939.	124336.	132976.
5	20904.	49506.	53750.	53607.	58235.	65984.	72698.	78041.	84119.
6	3526.	4999.	8260.	7887.	8567.	9707.	10695.	11570.	12375.
7	83197.	96912.	97260.	99701.	103109.	108121.	119303.	129675.	138563.
8	5320.	12890.	22500.	21483.	23177.	26443.	29137.	31515.	33711.
9	8760.	23150.	57900.	55283.	60058.	68047.	74970.	81099.	86748.
10	4247.	16413.	26870.	25657.	27471.	31579.	34772.	37636.	40258.
11	2071.	2267.	2390.	2248.	2411.	2400.	2595.	2779.	2917.
12	4448.	6372.	7630.	7383.	8021.	9088.	10113.	10831.	11586.
13	163370.	218169.	211040.	201500.	218096.	217561.	230720.	246412.	257913.
BEFORE ADJUSTMENT			598617.	649530.	740780.	790211.	846291.	910362.	
SUM & CO. PROJ. USED FOR ADJ			571558.	620903.	658341.	716297.	771661.	819530.	

PRINCE GEORGES

MCD	1960	1970	1975 PROJ	1975 PROJ	1980 PROJ	1985 PROJ	1990 PROJ	1995 PROJ	2000 PROJ
1	8410.	20914.	22850.	21661.	23719.	26790.	29482.	32190.	33772.
2	31003.	41885.	40100.	39534.	43299.	42972.	46018.	49304.	50434.



3	3301.	4451.	5900.	5876.	6435.	7268.	7998.	8733.	9161.
4	1910.	2290.	2350.	2340.	2563.	2553.	2805.	3035.	3145.
5	7301.	16705.	20300.	20217.	22139.	25005.	27517.	30745.	31521.
6	54335.	106350.	105300.	104870.	114836.	129707.	142734.	155849.	163504.
7	3071.	21715.	26300.	26193.	28682.	32396.	35650.	38925.	40837.
8	1618.	1485.	1500.	1494.	1636.	1552.	1669.	1760.	1774.
9	11943.	27623.	27000.	27503.	30116.	34017.	37433.	40873.	42841.
10	11204.	31579.	38800.	38641.	42314.	47793.	52593.	57426.	60246.
11	4709.	7932.	9050.	9013.	9870.	11147.	12267.	13395.	14052.
12	23530.	55965.	58850.	56576.	61953.	69975.	77064.	84079.	88210.
13	14192.	30318.	34500.	34359.	37624.	42497.	46705.	51062.	53570.
14	6046.	29161.	28900.	28682.	31408.	35475.	39039.	42625.	44719.
15	3721.	6969.	11850.	11802.	12923.	14597.	16063.	17539.	18400.
16	16002.	15491.	14550.	14491.	15868.	14835.	15523.	16191.	15966.
17	68547.	75728.	73000.	72702.	79611.	76689.	81701.	86594.	87172.
18	26754.	42670.	41100.	40932.	44822.	46099.	50211.	54759.	57344.
19	15895.	21909.	20800.	20921.	22910.	22903.	24668.	26549.	27315.
20	12488.	37739.	37900.	37000.	40516.	45763.	50359.	54986.	57688.
21	30855.	61688.	63300.	63041.	69033.	77972.	85304.	93687.	98289.
BEFORE ADJUSTMENT				680629.	751302.	832639.	935125.	1019491.	1102453.
SUM & CO. PROJ. USED FOR ADJ				677848.	742268.	808005.	873293.	950572.	999119.

QUEEN ANNE

MCD	1960	1970	1975 PROJ	1975 PROJ	1980 PROJ	1985 PROJ	1990 PROJ	1995 PROJ	2000 PROJ
1	2095.	2163.	0.	2269.	2198.	2193.	2228.	2278.	2312.
2	1555.	1846.	0.	2064.	2000.	1995.	2027.	2073.	2104.
3	3591.	3564.	0.	3785.	3667.	3659.	3718.	3800.	3853.
4	3114.	3832.	0.	4357.	4221.	4211.	4280.	4374.	4440.
5	3375.	3896.	0.	4301.	4167.	4157.	4225.	4318.	4383.
6	975.	919.	0.	953.	923.	921.	936.	957.	971.
7	1864.	2202.	0.	2456.	2380.	2374.	2413.	2467.	2504.
BEFORE ADJUSTMENT				19903.	22683.	26139.	26680.	26527.	27063.
SUM & CO. PROJ. USED FOR ADJ				20186.	19556.	19510.	19828.	20267.	20572.

ST. MARY'S

MCD	1960	1970	1975 PROJ	1975 PROJ	1980 PROJ	1985 PROJ	1990 PROJ	1995 PROJ	2000 PROJ
1	3496.	4219.	0.	4550.	4886.	5517.	6111.	6559.	6916.
2	2970.	3494.	0.	3722.	3997.	4255.	4711.	5057.	5332.
3	5023.	5811.	0.	6140.	6593.	6981.	7731.	8291.	8751.
4	1858.	2158.	0.	2285.	2453.	2601.	2880.	3092.	3260.
5	2481.	3285.	0.	3706.	3980.	4494.	4976.	5342.	5633.
6	3841.	5283.	0.	6071.	6519.	7362.	8153.	8752.	9229.
7	2392.	2976.	0.	3257.	3498.	3950.	4374.	4695.	4951.
8	16510.	19837.	0.	21348.	22923.	25887.	28668.	30775.	32448.
9	344.	325.	0.	322.	346.	347.	372.	395.	407.
BEFORE ADJUSTMENT				49334.	58096.	66465.	72451.	79533.	86257.
SUM & CO. PROJ. USED FOR ADJ				51400.	55195.	61395.	67977.	72967.	76926.

SOMERSET

MCD	1960	1970	1975	PROJ 1975	PROJ 1980	PROJ 1985	PROJ 1990	PROJ 1995	PROJ 2000
1	2144.	2181.	0.	2261.	2274.	2289.	2320.	2327.	2329.
2	617.	649.	0.	684.	688.	692.	701.	704.	704.
3	1587.	1452.	0.	1452.	1460.	1470.	1489.	1494.	1495.
4	1292.	1343.	0.	1408.	1415.	1425.	1443.	1448.	1449.
5	903.	837.	0.	842.	847.	853.	864.	867.	867.
6	847.	788.	0.	794.	798.	804.	814.	818.	819.
7	3816.	3110.	0.	3020.	3037.	3058.	3078.	3088.	3091.
8	1525.	1706.	0.	1853.	1864.	1876.	1901.	1907.	1909.
9	509.	458.	0.	454.	456.	459.	461.	467.	468.
10	693.	645.	0.	652.	656.	661.	669.	671.	672.
11	324.	287.	0.	282.	284.	286.	289.	290.	290.
12	1327.	1592.	0.	1790.	1800.	1812.	1836.	1841.	1844.
13	1013.	1070.	0.	1130.	1137.	1144.	1159.	1162.	1165.
14	810.	773.	0.	789.	793.	765.	771.	773.	773.
15	2221.	2042.	0.	2047.	2058.	2072.	2099.	2105.	2108.

BEFORE ADJUSTMENT	19034.	19507.	20335.	20572.	20727.	20950.
SUM & CO. PROJ. USED FOR ADJ	19458.	19568.	19667.	19700.	19762.	19784.

TALBOT

MCD	1960	1970	1975	PROJ 1975	PROJ 1980	PROJ 1985	PROJ 1990	PROJ 1995	PROJ 2000
1	10127.	11167.	0.	11993.	12687.	12563.	13127.	13654.	14061.
2	3874.	4413.	0.	4815.	5094.	5044.	5270.	5482.	5646.
3	2906.	3366.	0.	3703.	3917.	3878.	4052.	4215.	4341.
4	2714.	2761.	0.	2851.	3016.	3016.	3151.	3277.	3380.
5	1957.	1975.	0.	2031.	2149.	2143.	2239.	2329.	2404.
BEFORE ADJUSTMENT			26251.	27859.	28901.	30077.	31024.	32159.	
SUM & CO. PROJ. USED FOR ADJ			25393.	26863.	26644.	27839.	28957.	29833.	

WASHINGTON

MCD	1960	1970	1975	PROJ 1975	PROJ 1980	PROJ 1985	PROJ 1990	PROJ 1995	PROJ 2000
1	2051.	2054.	0.	2044.	2040.	2058.	2099.	2156.	2211.
2	3529.	4057.	0.	4314.	4306.	4345.	4428.	4552.	4649.
3	9589.	9257.	0.	8715.	8700.	8465.	8625.	8369.	8984.
4	1909.	2071.	0.	2142.	2137.	2157.	2198.	2259.	2318.
5	3509.	3582.	0.	3597.	3590.	3622.	3691.	3795.	3892.
6	3105.	3584.	0.	3507.	3500.	3532.	3599.	3701.	3795.
7	2445.	3454.	0.	4058.	4051.	4087.	4165.	4282.	4392.
8	1440.	1571.	0.	1629.	1626.	1641.	1671.	1719.	1762.
9	1677.	2267.	0.	2607.	2602.	2626.	2676.	2751.	2822.
10	4124.	4761.	0.	5073.	5063.	5109.	5207.	5353.	5490.
11	1364.	1415.	0.	1432.	1429.	1442.	1470.	1511.	1550.
12	2612.	3393.	0.	3827.	3820.	3855.	3928.	4039.	4142.
13	3406.	4107.	0.	4468.	4460.	4501.	4586.	4716.	4837.
14	2876.	4481.	0.	4580.	4571.	4612.	4700.	4832.	4957.
15	1592.	1595.	0.	1587.	1584.	1599.	1629.	1674.	1718.
16	1700.	2182.	0.	2447.	2443.	2465.	2512.	2582.	2648.
17	5311.	5487.	0.	5541.	5531.	5581.	5687.	5848.	5998.
18	3931.	5126.	0.	5793.	5782.	5835.	5946.	6113.	6270.
19	910.	1011.	0.	1058.	1055.	1065.	1086.	1116.	1144.
20	1064.	1383.	0.	1560.	1557.	1572.	1601.	1647.	1689.

21	5765.	6111.	0.	6249.	6237.	6294.	6413.	6594.	6763.
22	5938.	5688.	0.	5336.	5325.	5169.	5267.	5415.	5482.
23	2143.	2589.	0.	2820.	2815.	2840.	2895.	2975.	3052.
24	682.	827.	0.	903.	900.	909.	926.	952.	977.
25	10057.	9319.	0.	8602.	8596.	8246.	8403.	8640.	8713.
26	5232.	7346.	0.	5704.	5598.	8667.	8831.	9080.	9313.
27	3258.	5310.	0.	5553.	5543.	5594.	5700.	5861.	6011.
BEFORE ADJUSTMENT				115627.	121805.	127058.	128719.	129472.	132162.
SUM & CO. PROJ. USED FOR ADJ				108745.	107842.	107838.	109038.	113034.	115598.

WICOMICO

MCD	1960	1970	1975 PROJ	1975 PROJ	1980 PROJ	1985 PROJ	1990 PROJ	1995 PROJ	2000 PROJ
1	1493.	1459.	0.	1495.	1431.	1510.	1610.	1721.	1826.
2	1024.	964.	0.	983.	946.	978.	1064.	1137.	1206.
3	1116.	1195.	0.	1270.	1217.	1259.	1345.	1428.	1504.
4	1542.	1823.	0.	2044.	1957.	2064.	2206.	2357.	2503.
5	11239.	12543.	0.	13637.	13058.	13777.	14717.	15732.	16699.
6	815.	721.	0.	739.	707.	746.	796.	851.	902.
7	1182.	1188.	0.	1221.	1169.	1237.	1317.	1408.	1494.
8	1871.	2239.	0.	2527.	2419.	2553.	2727.	2914.	3094.
9	8331.	9960.	0.	11235.	10757.	11349.	12124.	12960.	13756.
10	1213.	1197.	0.	1226.	1174.	1239.	1321.	1412.	1498.
11	2136.	2192.	0.	2279.	2182.	2302.	2459.	2628.	2790.
12	1246.	1103.	0.	1130.	1082.	1142.	1218.	1301.	1380.
13	9045.	11143.	0.	12142.	11626.	12265.	13102.	14005.	14867.
14	1231.	1084.	0.	1111.	1063.	1122.	1197.	1278.	1356.
15	1324.	1558.	0.	1743.	1669.	1760.	1881.	2010.	2133.
16	3342.	3867.	0.	4286.	4104.	4330.	4626.	4944.	5249.
BEFORE ADJUSTMENT				54773.	55924.	57783.	57958.	59064.	60156.
SUM & CO. PROJ. USED FOR ADJ				59072.	56562.	59649.	63710.	68084.	72257.

WORCESTER

MCD	1960	1970	1975 PROJ	1975 PROJ	1980 PROJ	1985 PROJ	1990 PROJ	1995 PROJ	2000 PROJ
1	5262.	5843.	0.	6354.	6997.	7600.	8223.	8846.	9491.
2	4522.	4671.	0.	4911.	5411.	5854.	6253.	6719.	7125.
3	6195.	6136.	0.	6803.	7500.	8144.	8874.	9612.	10303.
4	896.	805.	0.	854.	940.	999.	1063.	1134.	1191.
5	1599.	1485.	0.	1599.	1762.	1890.	2030.	2179.	2308.
6	0.	0.	0.	0.	0.	0.	0.	0.	0.
7	526.	525.	0.	585.	644.	699.	762.	827.	886.
8	2921.	1467.	0.	1410.	1553.	1687.	1751.	1869.	1956.
9	0.	0.	0.	0.	0.	0.	0.	0.	0.
10	2712.	3510.	0.	4109.	4516.	4904.	5444.	5934.	6413.
BEFORE ADJUSTMENT				27351.	28032.	29210.	31049.	32383.	33985.
SUM & CO. PROJ. USED FOR ADJ				26921.	29325.	31776.	34401.	37157.	39699.

NORMAL EXIT. EXECUTION TIME: 2995 MILLISECONDS.
QFIN

DO NOT CIRCULATE

RUNID: DAVE ACCT: PROJECT: SPOTTY
TIME: MEMORY: 00:00:09.600 I/O: 00:00:02.932
CPU: 00:00:06.357 WAIT: 00:13:39.440
CC/ER: 00:00:16.695
IMAGES READ: 70 PAGES: 6
START: 15:19:59 NOV 25, 1977 FIN: 16:30:11 NOV 25, 1977
ACCOUNT NUMBER? QGTERM

UNIV. OF MD. COLLEGE PARK



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HECKMAN
BINDERY INC.



MAY 85



N. MANCHESTER,
INDIANA 46962

